REMARKS

Attached hereto as pages 31-33, pursuant to Rule 1.121(c)(1)(ii), is a marked-up version of the amended claims.

The specification has been amended as set forth above to correct minor informalities, including those noted in the Office Action dated January 8, 2003, page 2, item "1."

Claims 1-3 were rejected under 35 U.S.C.§102(b) over U.S. Patent No. 3,066,883 (Egan '883).

The applicant appreciates the indication in the January 8, 2003 Office Action, page 3, item "6." that claims 4-8 and 10-12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 4 and 7 are amended as set forth above in order to be rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, claims 4 and 7 are in condition for allowance. Claim 1 is cancelled as set forth above. Claims 2, 3 and 9 are amended as set forth above to depend from allowable claim 4. Claims 5, 6, 8, 10, 11 and 12 all ultimately depend from allowable claim 4. Accordingly, claims 2-12 are in condition for allowance. Accordingly, reconsideration and withdrawal of this rejection are requested.

Claim 9 was rejected under 35 U.S.C.§103(a) over Egan '883 in view of U.S. Patent No. 4,572,451 (Ikeda '451).

As noted above, claim 9 is amended as set forth above to depend from allowable claim 4. Accordingly, claim 9 is allowable. Reconsideration and withdrawal of this rejection are requested.

The applicants also appreciate the indication that claims 13-18 are allowed.

Favorable consideration of new claims 19 - 73 is respectfully requested.

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

June 9, 2003

Date

Kevin C. Brown
Reg. No. 32,402

KCB:jms

CLEAN VERSION OF PARAGRAPHS INCORPORATING CHANGES MADE

Please replace the paragraph in page 2, lines 21-27, with the following:

The buildup of the roll segments, i.e, the individual rolls, on the core shaft is begun while the core shaft is supported by the primary arms. The geometry of the arms, the primary or main drum, and the nip roll is such that the core shaft is supported during the web transfer, and during the initial roll building, in the manner that assures that the core shaft and cores are straight or parallel with the surface of the primary drum, and a good start is obtained by way of proper loading by the primary nip roll.

Please replace the paragraphs in page 6, lines 3-8, with the following:

The secondary arms are used for safety to insure the winding roll set is contained inside the two winding drums. They are also used to prevent lateral movement of the winding roll set and to eject the finished roll set.

A position sensing device is incorporated into a secondary arm pivot to counter balance the arm assembly through support arm cylinders to prevent excessive loading of the core shaft by the support arms that would cause shaft deflection.

Please replace the paragraph in page 7, lines 5-9, with the following:

Fig. 5 illustrates the primary arms moved to a -25° position permitting the core to drop against the drum and causing the sped-up core to contact the web on the primary drum, ready to move to a roll change position in which the primary arms rotate to a -20° position, causing adhesive to spray on the web and a spring loaded knife to fire, making a transfer onto the new core:

Please replace the paragraph in page 8, lines 16-20, with the following:

CLEAN VERSION OF PARAGRAPHS INCORPORATING CHANGES MADE

A first or primary winding drum 22 is rotatably mounted between the side frames 13 and 14, and driven by a floor mounted electric drive, not shown. A pair of primary arms 24, 25 are pivotally mounted on the side frames about a pivot axis concentric with the rotational axis of the drum 22, and are positioned at each respective transverse end of the drum.

Please replace the paragraph in page 8, lines 27-32, with the following:

A fixed cam plate 29 is provided on each of the side frame members 13 and 14. Each cam plate 29 has a forward facing sloping surface 31 that is inclined at an angle substantially parallel to the slot 28 in about the -25° position of the arms and is provided further with an upper horizontal core shaft supporting cam surface 32, at least a portion of which is exposed when the primary arms 24,25 are rotated to approximately -30° position.

Please replace the paragraph in page 9, lines 24-27, with the following:

A spray bar 44 is fixably mounted on a cross member 45 and supports a plurality of adjustably positionable adhesive spray nozzles 46. The spray nozzles are connected to a source of adhesive and may be aligned so that primarily only the web segments are sprayed by adhesive for transfer to a new core.

Please replace the paragraph in page 13, lines 12-27, with the following:

During the continued winding of the roll set 100A, the primary arms 24, 25 continue to rotate and slowly move the winding set to the +30° from the vertical position as defined. After the primary arms are in the 30° position, substantially as shown in Figs. 7 and 8, and the winding roll 100A reaches a specific diameter of say 18", the secondary or support arms are moved slowly back toward the primary drum 22 and are stopped by a

CLEAN VERSION OF PARAGRAPHS INCORPORATING CHANGES MADE

proximity switch 120 on the ends of the arms, at the notch 80. During this time, the secondary support drum 52 is brought into raised position in a speed mode. The proximity switch 120 indicates that the core shaft 20 is now in the notch, and the position substantially is shown in Fig. 8. At that time, the latch plate 84 is activated by the cylinders 80 to lock and secure the core shaft in the notch 80 of the secondary arms. The winding now progresses, as shown in Fig. 8, in which the building roll set is wound into the secondary drum while engagement by the nip roll 30 is maintained. The up position of the support drum, at 52, reduces the lift pressure in cylinders 59 to a counter balancing pressure applied by the cylinders 59 to the effect that the loading on the roll 100A is zero or negligible so the primary nip roll 20 loading is dominant.

Please replace the paragraph in page 14, lines 18-26, with the following:

The width of the slot 28 formed generally radially in the arms 24 and 25 is such that it forms a close fit with one of the support surfaces adjacent the ends of the core shaft 20. The core shaft 20 is shown in elevation at the top of Fig. 2 where it may be seen that each end of the core shaft is provided with a pair of support surfaces 20a and 20b at each end. The slots 28 form a close fit with the core shaft surface 20a and prevent lateral movement of the core shaft. The alignment of the slot in the arms approximates the arc of movement of the lay on roll 30 at the start-up position, as shown in Fig. 7. Therefore, at this critical time, the ends of the core shaft 20 are restrained by the walls of the slot 28 against lateral movement.

Please replace the paragraphs in page 15, lines 27-31, with the following:

5. Primary arms 24,25 move 5° to -25° position from vertical centerline and core shaft 20 lowers off cams 28 and onto web 102 and drum 22, straightening the natural deflection.

CLEAN VERSION OF PARAGRAPHS INCORPORATING CHANGES MADE

6. As primary arms move to -20° position, adhesive sprays onto web and pastes down the tails on the slit wound rolls 100. See Figure 5.

Please replace the paragraph in page 16, lines 17-22, with the following:

13. After the support drum reaches zero speed, the support arms 50.51 move to the unload position. See Figure 7. In this position, the weight of the wound rolls, and the retraction of the drum 52, causes the wound rolls to sag. The extent of sag is limited by the upper edges of the roll sets coming into contact with each other, thereby limiting the extent of sag. When the roll set is supported bu the elevating table, the core shaft resumes its straight line position.

Please replace the paragraph in page 17, lines 6-9, with the following:

20. The support drum 52 raises as the support arms pivot toward the drum 22 in the speed mode under raise pressure and switches to balance pressure at, say, 24" diameter and the winding set winds into the balanced support drum.

VERSION OF PARAGRAPHS WITH MARKINGS TO SHOW CHANGES MADE

Page 2, lines 21-27:

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Fig. 5 illustrates the primary arms moved to a -25° position permitting the core to drop against the drum and causing the ~~speed-up~~sped-up core to contact the web on the primary drum, ready to move to a roll change position in which the primary arms rotate to a -20° position, causing adhesive to spray on the web and a spring loaded knife to fire, making a transfer onto the new core:

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VERSION OF PARAGRAPHS WITH MARKINGS TO SHOW CHANGES MADE

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Page 9, lines 24-27:

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VERSION OF PARAGRAPHS WITH MARKINGS TO SHOW CHANGES MADE

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VERSION OF PARAGRAPHS WITH MARKINGS TO SHOW CHANGES MADE

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Page 17, lines 6-9:

20. The support drum ~~50~~ 52 raises as the support arms pivot toward the drum 22 in the speed mode under raise pressure and switches to balance pressure at, say, 24" diameter and the winding set winds into the balanced support drum.

VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

2. (Amended) The method according to claim ~~1~~ 4 in which said core shaft and the cores thereon are brought substantially to web line speed by the driven nip roll prior to contact of the cores with the split webs on the winding drum.

3. (Amended) The method according to claim ~~1~~ 4 in which said restraining step includes securing the core shaft at its ends against lateral movement by capturing the ends of the core shaft in an elongated slot that extends in a direction generally radially of the drum and provides a pathway for the core shaft with loaded cores thereon to be moved into contact with split rolls on said drum.

4. (Amended) ~~The~~ A method ~~according to claim 1~~ of continuously winding split webs onto individual cores carried on a common elongated shaft into a corresponding plurality of large diameter rolls including transfer of the split webs, substantially at line speed, from fully wound rolls onto such cores, comprising the steps of:

(a) placing the core shaft with cores thereon into surface contact with such split webs supported on a winding drum and bringing said core shaft and cores thereon up to line speed;

(b) applying a driven nip roll to said cores substantially at line speed while simultaneously constricting the ends of said core shaft against movement lateral to a radius line from the axis of rotation of said drum through said core shaft;

(c) while said core shaft is so restrained, severing the split webs at positions downstream of the region of contact of said cores with said webs by said drum and simultaneously transferring said webs onto corresponding cores on said core shaft;

(d) continuing to wind said webs onto said cores while said core shaft is so constrained laterally and constrained by said driven nip roll against core shaft deflections that would otherwise cause critical speed limitations,

_____in which the winder has a movable secondary support drum that is movable into contact with rolls building on the cores and in spaced relation to the winding drum, further including the step of bringing the secondary drum into contact with such rolls

VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

when the rolls have attained a predetermined diameter while maintaining contact of said driven nip roll with said building rolls.

7. (Amended) ~~The~~ A method ~~according to claim 1~~ of continuously winding split webs onto individual cores carried on a common elongated shaft into a corresponding plurality of large diameter rolls including transfer of the split webs, substantially at line speed, from fully wound rolls onto such cores, comprising the steps of:

(a) placing the core shaft with cores thereon into surface contact with such split webs supported on a winding drum and bringing said core shaft and cores thereon up to line speed;

(b) applying a driven nip roll to said cores substantially at line speed while simultaneously constricting the ends of said core shaft against movement lateral to a radius line from the axis of rotation of said drum through said core shaft;

(c) while said core shaft is so restrained, severing the split webs at positions downstream of the region of contact of said cores with said webs by said drum and simultaneously transferring said webs onto corresponding cores on said core shaft;

(d) continuing to wind said webs onto said cores while said core shaft is so constrained laterally and constrained by said driven nip roll against core shaft deflections that would otherwise cause critical speed limitations,

_____in which the nip roll is driven at a speed mode prior to the cutting step and is switched to a speed limited adjustable torque mode following the transfer of the webs onto the cores of the core shaft.

9. (Amended) ~~The~~ A method according to claim ~~1~~ 4 including the step of spraying an adhesive on the inside surface of the webs leading to the fully wound rolls immediately prior to said cutting step for simultaneously gluing the tail segments of the cut webs onto the respective wound rolls and providing an adhesive surface by which the individual webs are attached to the respective cores on the core shaft.

VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

13. (Amended) A drum type winder for continuously winding a split web into large diameter rolls on individual cores carried on a core shaft, comprising a frame, a main winding drum on said frame, a pair of arms mounted on said frame for rotation about an axis in common with the axis of said main winding drum, an elongated core shaft for supporting a plurality of cores thereon, a ~~lay-on~~ nip roll carried on said arms and engagable with cores on such core shaft, said arms being provided with generally radially extending slots through which the ends of said core shaft extend when a core is received in said slots, said slots defining walls that resist lateral movements of the core shaft ends while permitting rotation of said core shaft on said arms and movement of said core shaft radially of said drum along said slots, said slots being open at their respective outer radial ends to receive said core shaft therein and having a radial length that permits said core shaft to move radially inwardly to place the cores thereon in engagement with a web carried on the surface of said drum while said cores are simultaneously engaged by said ~~lay-on~~ nip roll, thereby maintaining said core shaft in a generally straight line position for transfer of webs onto cores on said shaft.